

Untreated Patients with Multiple Sclerosis: Prevalence and Characteristics in Denmark and in the United States

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Objective: To assess numbers of untreated patients with multiple sclerosis (MS), and their demographic/clinical characteristics in Denmark and the United States (US).

Background: Evidence suggests disease modifying therapies (DMTs) should be offered as soon as possible after MS diagnosis. Estimates of numbers of patients with MS who remain untreated post-diagnosis are few and variable.

Design/Methods: Patients ≥ 18 years of age with MS were identified through the Danish Multiple Sclerosis Registry (incident MS cases, 1995-2015, index date: start of diagnosis year) and US MarketScan® Research Database (2011-2014, index date: first MS ICD-9 code). Patients with < 12 months' history prior to index date were excluded. Untreated MS cohorts were defined as patients without any DMT during follow-up.

Results: Among 10,557 Danish MS patients, 2,994 (28.4%) were untreated (median follow-up 12 years; IQR, 7-17). Among 75,473 US patients, 32,434 (43.0%) remained untreated at time of observation (median follow-up 1.8 years; IQR, 0.9-2.9). Untreated Danish patients were older at time of diagnosis (median age 48 years (IQR, 40-55) vs 39 years (IQR, 31-48 in the overall MS cohort) and were diagnosed in the earlier years (1995-2004; 63.3% vs 45.5% in the overall cohort). Almost twice as many untreated Danish patients were diagnosed with primary progressive MS (PPMS) than relapsing-remitting MS. Untreated US patients were median 53 years of age (IQR, 44-61). Pre-index, 10.7% of untreated patients received hormone therapy (overall patients, 15.3%), 32.1% a glucocorticoid (overall patients, 36.8%), and 7.1% a DMT (overall patients, 43.3%). In prior DMT patients, 1,833 (79.1%) received immunomodulator-only treatment.

Conclusions: Given evidence of benefits of early, effective treatment, these results may encourage more widespread early treatment for MS. The high proportion of untreated patients in the US and in the identified cohort from the Danish MS Registry may be due to a higher proportion of PPMS patients lacking treatment options during the study period.